AECOM

AECOM
3995 Via Oro Avenue
Long Beach, CA 90810
www.aecom.com

562 420 2933 tel
562 420 2915 fax

April 27, 2010

Ms. Carolyn d'Almeida
Remedial Project Manager
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Re: **Technical Responses to EPA Comments**
DNAPL Feasibility Study
Montrose Superfund Site, Los Angeles, California

Dear Ms. d'Almeida:

On behalf of Montrose Chemical Corporation of California (Montrose), this letter transmits technical responses to Environmental Protection Agency (EPA) comments dated January 27, 2010, on the draft Feasibility Study (FS) for dense non-aqueous phase liquid (DNAPL) at the Montrose Superfund Site (Site) in Los Angeles, California. The technical responses are 37-pages long, and therefore, the major points are briefly summarized below for your convenience. Responses are grouped together by technical issue rather than respond to each comment in numerical order. Additionally, comments pertaining to ARARs or compliance with RAOs are addressed separately by Latham & Watkins.

Comments Related to Nature and Extent of DNAPL Contamination

Dissolved MCB Plume Expansion in the BFS

Downgradient: Montrose does not agree with EPA's evaluation of the downgradient groundwater monitoring data in the Bellflower Sand (BFS). There is no technical evidence to suggest that the toe of the MCB plume in the BFS is expanding downgradient. EPA has not considered the April 2009 result from well BF-28, where MCB was detected at a concentration of 11 ug/L. The concentration of MCB in BF-28 has decreased over the last 3 years, and the concentration trend in this well does not suggest that the MCB plume is expanding downgradient. EPA has also not considered the MCB concentration trend in other BFS wells located at the toe of the dissolved-phase plume, such as BF-25 and BF-26.

Upgradient: Montrose does not agree that an increasing dissolved MCB concentration trend is due to DNAPL migration within the BFS or that the DNAPL migration is approaching the TI Waiver Zone boundary. For DNAPL to be migrating north under the former Boeing Property and near the TI Waiver Zone, it would (a) have to be present in the BFS, (b) occur in saturations high enough to be mobile under gravity, (c) migrate cross-dip and hydraulically up/cross-gradient, (d) occur in high enough quantities to not reach residual saturation over the 560 foot lateral distance between the Montrose Property and TI Waiver Zone, and (e) overcome the solubilizing effects of the groundwater flow within the BFS. Based on the preceding, it is exceptionally unlikely that DNAPL is migrating north under the former Boeing Property and threatening the TI Waiver Zone boundary. Furthermore, CMW001 is located near the TI Waiver Zone boundary but has been exhibiting a declining MCB concentration trend since March 2005. CMW002 is located south of the TI Waiver Zone boundary and has been exhibiting a relatively stabilized MCB concentration trend since March 2005.

<u>MCB Mass in the BFS:</u> EPA estimates that there may be 10,000 pounds of MCB in the BFS subject to remediation during implementation of a focused steam injection remedy (RA 5A). Montrose does not agree and estimates that there is approximately 2,600 pounds of MCB dissolved in groundwater within the BFS hot floor footprint for RA 5A. Erroneous assumptions for both area and MCB concentration resulted in an overestimation of MCB mass in the BFS within the hot floor footprint identified for steam injection RA 5A.

<u>Continuity of Basal Layer in the UBA:</u> EPA has misinterpreted the results of the HD modeling and references to the basal layer of the UBA. EPA refers to the basal layer in the UBA as a "silt", which is incorrect. The basal layer of the UBA consists of silty sand as indicated in the DNAPL FS. This silty sand layer is present in every boring drilled past 100 feet within the DNAPL-impacted area and varies in thickness between 8 and 23 feet. The significance of this layer as presented in the DNAPL FS was that it is the bottom layer in the UBA. HD modeling did not show any DNAPL passing the bottom layer of the UBA, or in other words, entering the BFS.

Comments Related to Uniqueness of Montrose DNAPL

<u>Uniqueness of Montrose DNAPL:</u> The Montrose DNAPL is unique, and only two other sites in the entire country have been identified as having a similar DNAPL (Arkema and Velsicol Sites). No thermal remediation bench-scale testing, field pilot testing, or full-scale thermal remediation has been conducted or selected at either of these two sites.

<u>Thermal Remediation:</u> Montrose disputes EPA's estimates of thermal remediation effectiveness and MCB mass removal. In the January 2010 comments, EPA has estimated that thermal remediation could remove up to 94% of the MCB mass. During development of the FS, EPA estimated that thermal remediation could remove up to 99% of the MCB mass or more. EPA additionally requested that Montrose assume only 2 to 3 soil pore volumes of steam flushing in estimating costs for steam injection remedial alternatives. A higher mass removal efficiency and lower energy demand are not appropriate assumptions for the Site. The nature of the Montrose DNAPL combined with the complex lithology and DNAPL architecture of the Site will (a) reduce the MCB mass removal efficiency as compared with other sites exhibiting different lithology, architecture, and contaminants, and (b) increase the energy demand required to achieve that mass removal efficiency.

Montrose contends that EPA's estimate of thermal remediation performance at the Montrose Site is not based on sites with similar contaminants under similar geologic settings. The thermal remediation case sites referenced by EPA in the January 2010 comments do not provide any evidence to estimate MCB mass removal efficiencies at the Montrose Site as indicated below:

- <u>Eastland Woolen Mill Site:</u> An <u>ex-situ</u> thermal remediation technology was used to treat soils containing exceptionally low levels of MCB.
- <u>Taunton Site:</u> ISTD was used to treat shallow, sandy, and primarily unsaturated soils containing a dissimilar viscous sludge over a small area. Furthermore, uncontrolled lateral migration of NAPL and dissolved-phase contaminants occurred at this site following thermal treatment.
- <u>Kelly AFB:</u> The ERH remedy at the Kelly AFB S-1 Site has not yet been implemented but will treat shallow, gravelly, and primarily unsaturated soils containing low concentrations of MCB dissolved in a low density oil (LNAPL) over a small area.

Comments Related to DNAPL Mass Estimates

DNAPL Mass in the UBA: During development of the DNAPL FS, EPA commented that Montrose's estimate of DNAPL mass was underestimated, not overestimated as currently indicated in EPA's comments. Although there is a considerable amount of uncertainty associated with the mass estimates, Montrose previously estimated that between 375,000 and 796,100 pounds of DNAPL is present at the Site. Based on EPA's comments during development of the FS, only the higher or liberal mass estimate was presented in the FS. Since the liberal mass estimate was intended to reflect a reasonable high range, Montrose does not object to a DNAPL mass estimate of 582,000 pounds which is (a) lower than Montrose's liberal estimate, (b) between the range previously estimated by Montrose, and (c) very close to the average of Montrose's estimated DNAPL mass range (585,500 pounds). However, EPA has used an alternate method to estimate DNAPL mass, and following review of the documentation provided on March 11, 2010, Montrose does have concerns regarding the accuracy of EPA's mass estimate.

Accuracy of EPA DNAPL Mass Estimate: EPA's calculations of DNAPL mass at the Montrose Site assumed that the MCB concentrations were reported on a dry weight basis, which is incorrect and resulted in an erroneously low estimate of DNAPL mass. EPA also assumed a focused treatment area of 30,492 square feet to estimate DNAPL mass, which is larger than the focused treatment area defined in the DNAPL FS (26,000 square feet). EPA estimated a mobile DNAPL mass of 80,000 pounds based on a residual DNAPL concentration of 64,000 mg/kg, which is incorrect (53,000 mg/kg) and resulted in an erroneously low estimate of mobile DNAPL mass. These errors significantly affect the DNAPL mass estimates as follows:

DNAPL Mass Estimate	Estimated DNAPL Mass (pounds)		
	Entire DNAPL-Impacted Area	Focused Treatment Area	Mobile DNAPL Mass
EPA Estimate – Jan 2010	582,000	490,000	80,000
Partially Corrected EPA Estimate	842,000	610,000	143,500
Montrose DNAPL FS – Apr 2009	796,100	473,600	221,800

Additionally, EPA has assumed that DNAPL occurs only once at each boring, which is not true. DNAPL was found to typically occur between one and seven times at each soil boring. EPA has also assumed that the soil samples were collected at the very base of a DNAPL pool, which is not true. There was no protocol in the DNAPL Reconnaissance Investigation to only collect samples from the base of a potential DNAPL pool. Although EPA's methodology accounts for a concentration profile vertically within DNAPL pools, the numerous erroneous assumptions significantly reduces the accuracy and reliability of EPA's DNAPL mass estimates.

Comments Related to Mass Flux Evaluation

Dominant Groundwater Flow Direction in the UBA: The dominant groundwater flow direction in the UBA is horizontal, not vertical as EPA indicates in their comment. The bulk horizontal hydraulic conductivity in the UBA is several orders of magnitude higher than the bulk vertical hydraulic conductivity, which overcomes the one order of magnitude difference in the hydraulic gradients. As a result, the estimated groundwater velocity in the horizontal direction is 0.13 foot per day while the estimated groundwater velocity in the vertical direction is 0.00043 foot per day. These estimates indicate that the horizontal groundwater velocity is approximately 300 times greater than the vertical groundwater velocity and is the dominant flow direction. Since the dominant flow direction in the DNAPL-impacted UBA is horizontal, the timeframe for hydraulic containment of the UBA will be the longer than for the

BFS. Therefore, it was appropriate to focus the mass flux evaluation on concentrations in the UBA rather than the BFS.

Applicability of Falta Method: The method provided by Falta et al. (2005a) is a peer-reviewed, published, and state of the practice approach that was supported by EPA through the National Risk Management Research Laboratory, the Strategic Environmental Research and Development Program (SERDP), and development of the REMChlor model. Since the intent of Montrose's evaluation was to determine the time to achieve the cleanup standard for chlorobenzene immediately downgradient of a continuing source, rather than evaluate downgradient plume behavior, the REMChlor model itself was not used. Instead, the numerical solutions presented by Falta et al. (2005a) were utilized to estimate the time to achieve the cleanup standard for chlorobenzene. Pursuant to personal communication with Dr. Ronald Falta, it was confirmed that it is reasonable to use this approach to estimate dissolution timeframes.

MCB Solubility: The effective aqueous solubility for chlorobenzene specified by EPA (205 mg/L) is incorrect. Although the DNAPL is composed of approximately 50/50 chlorobenzene and DDT on a percent mass basis, the mole fraction is considered when calculating effective solubility's using Raoult's law, not the percent mass. The molecular weight of DDT (354.49 g/mol) is more than 3 times higher than the molecular weight of chlorobenzene (112.56 g/mol). As a result, the effective multi-component aqueous solubility for chlorobenzene from DNAPL on a mole basis is 410 mg/L, as indicated in Section 6.2.2.1 of the Final Remedial Investigation (RI) Report (EPA, 1998).

Comments Related to HD Modeling

Initial Conditions: The DNAPL thickness and saturation numbers cited by EPA (i.e., 2.4 feet and 30%) are representative of fine sand, not coarse sand. It was necessary to simulate a local coarse-grained zone in the model to create an adequate reservoir of DNAPL and prevent spontaneous mobilization of the DNAPL within the surrounding fine sand. The DNAPL pool specified in the model is "mobile", and without use of an entry pressure barrier, would move under static (non-pumping) conditions. To overcome this issue, the DNAPL was emplaced in a coarse sand and was surrounded by a fine sand. The spontaneous mobilization under non-pumping conditions is related to a limitation of the van Genuchten relationship and is not due to specifying an unrealistically high DNAPL saturation and/or pool height. It was for this reason that an entry pressure boundary was used, and it was not related to specifying an inappropriate DNAPL pool height. The DNAPL pool height specified in the model (i.e., 0.2 feet) is the appropriate pool height for a DNAPL pool with a basal saturation of 30% in coarse-grained sand.

Vertical Migration: The capillary pressure curve referenced by EPA (i.e., Figure 4) is not the appropriate curve for the basal silty sand layer. Figure 4 is the entry pressure relationship based on capillary curves obtained from five sand samples overlying the basal layer, and these data are not representative of the basal silty sand. The basal silty sand is a finer-grained unit with correspondingly higher entry pressures. The entry pressure used for the basal silty sand was appropriate given the finer-grained nature of this zone, and therefore, the model does not underestimate the potential for DNAPL to penetrate the basal silty sand. Based on the HD modeling results, a DNAPL pool would have to accumulate in the overlying sand to a height of more than 8 feet in order to exceed the entry pressure of the silty sand at the base of the UBA (H+A and Intera, 2009).

Comments Related to Hydraulic Displacement (RA 4)

Reinjection of Untreated Water under HD: In a cost estimate dated November 12, 2007, CH2M Hill assumed that groundwater recovered during an HD remedy would not require treatment prior to reinjection. Montrose discussed this reinjection scenario with EPA during a meeting held on April 15, 2008, and EPA agreed to include HD with untreated groundwater reinjection as a candidate alternative in the FS. EPA's objections to this alternative contradicts prior agreements made between Montrose and EPA during development of the FS. Additionally, as indicated in Section 4.9.3 of the DNAPL FS, reinjection of untreated groundwater was previously approved by the regulatory agencies for the HD field pilot tests conducted in 2004 and 2005. Under HD, groundwater injection and extraction are balanced, and reinjection of untreated groundwater carries no additional risk of plume migration. Reinjection of untreated groundwater for purposes of in-situ DNAPL flushing has previously been approved by EPA at other Superfund Sites, such as the UPRR Tie Plant Site in Laramie, Wyoming. HD with untreated groundwater reinjection should be retained as a candidate alternative.

Unit Cost of HD and Steam Injection: EPA estimates a unit cost for HD of $365 per pound of MCB removed and a unit cost range of $108 to $173 per pound of MCB removed for steam injection RA 5A. The unit costs calculated by EPA are incorrect. EPA has calculated unit costs by dividing the entire RA cost by the mass removal estimated for HD or steam injection. However, the entire RA costs include other remedy components such as containment, institutional controls, and SVE in the unsaturated zone, and the mass removed by SVE is not accounted for in EPA's calculation. To evaluate the true cost effectiveness, the cost of the HD or steam injection remedial component must be divided by its associated estimated mass removal. The correct unit costs under various mass estimate and pore volume flushing scenarios are presented below.

DNAPL Mass Estimate	RA 4 Hydraulic Displacement (50-foot well spacing)	RA 5A Focused Steam Injection (2.5 Pore Volumes)	RA 5A Focused Steam Injection (6 Pore Volumes)
DNAPL FS	$33/lb DNAPL $66/lb MCB	$113/lb MCB	$157/lb MCB
EPA Mass Estimates	$91/lb DNAPL $182/lb MCB	$93 - $149/lb MCB	$130 - $207/lb MCB
Partially Corrected EPA Mass Estimates	$51/lb DNAPL $102/lb MCB	$75 - $119/lb MCB	$104 - $166/lb MCB

Using the DNAPL FS or partially corrected EPA mass estimates and assuming 80% recovery of mobile DNAPL mass, DNAPL remedy unit costs for HD are lower than unit costs for steam injection over a focused treatment area. If up to 95% of the mobile DNAPL mass were recovered by HD, as demonstrated at the UPRR Laramie Site (Sale and Applegate, 1994), the HD remedy unit costs would be $28 per pound of DNAPL or $56 per pound of MCB using the DNAPL FS mass estimates.

Additionally, Montrose does not agree that liquid-phase DDT removed by HD should be excluded from the cost comparison. DDT is a hazardous substance, and a reduction in hazardous substance toxicity and volume is recognized by the National Contingency Plan (NCP). The ability of candidate RAs to reduce the toxicity and volume of hazardous substances should be considered in the DNAPL FS.

Comments Related to Steam Injection (RA 5A and 5B)

Post-Thermal Residual MCB Saturations of 4% and 0.5%: EPA has based thermal remediation efficiencies on post-thermal residual MCB saturations of 0.5% and 4%. While the 4% residual MCB saturation is reasonable and based on one of Montrose two 2-D study results (the other one had a 6% MCB residual saturation), the 0.5% residual MCB saturation is not an appropriate assumption for the Montrose Site. The 0.5% residual saturation assumption was based on the steam injection pilot test conducted at the Unocal Guadalupe Site. Conditions associated with the Guadalupe Refinery are significantly different from the Montrose Site with respect to geology and contaminant type, and therefore, field pilot test results do not reasonably approximate the performance of steam injection at the Montrose Site. The 0.5% residual saturation assumption is based on post-test results from a boring located 15 feet from a steam injection well, which received an estimated 21.6 pore volumes of steam flushing. For the Montrose Site, EPA has proposed a well spacing of 60 feet and an energy demand of only 2 to 3 pore volumes of steam flushing. Furthermore, residual contaminant concentrations up to 7,000 mg/kg were detected in this boring at the Guadalupe Site, and the average residual contaminant saturation at this boring was 1.6%, not 0.5%.

The Pilot Test Panel for the Guadalupe Site estimated that contaminant concentrations could be reduced to between 1,000 and 5,000 mg/kg or 0.5% to 2.5% residual saturation under optimized conditions and a well spacing of only 20 feet. Therefore, EPA has based steam injection effectiveness at the Montrose Site on the estimated performance of a hypothetical steam injection system under optimized conditions, which was never installed by Unocal and does not reasonably simulate the conceptual design for the Montrose Site. Montrose does not agree with use of a hypothetical performance standard from a site with significantly different conditions and assumptions for well spacing and pore volumes of steam flushing.

Effectiveness Ranking for Steam Injection: EPA has interpreted that the term "potentially effective" is ranked above "ineffective" but below "minimally effective". This interpretation is not correct, and the position of this term in the description of effectiveness categories (Sections 4.0 and 5.2 of the FS) was not intended to reflect its ranking relative to the other terms. The term "potentially effective" indicates that the effectiveness is uncertain. The layered and low permeability nature of the UBA is not ideal for steam injection and may pose significant challenges for a steam remedy. If the DNAPL architecture were different, then a higher effectiveness ranking may be appropriate. However, given all the uncertainties associated with application of steam injection to the Site, a "highly effective" ranking is not justified. Remediation of DNAPL in a heterogeneous, low permeability aquitard is challenging, and it is unlikely that any candidate remedial technology will be ranked as "highly effective". Steam injection is not a presumptive remedy for the Montrose Site, and a "highly effective" ranking cannot be arbitrarily assigned to this technology.

Conductor Casings for the Hot Floor Wells: Montrose does not agree that conductor casings are "probably unnecessary" during hot floor well installation. Installation of permanent conductor casings is the most protective method for preventing vertical cross-contamination during drilling. The risk of vertical contaminant migration, either during drilling or behind casing following drilling, is real and has previously occurred at other multi-layer contaminated sites. Given the concerns over vertical migration of DNAPL, the most protective drilling method should be used to protect the BFS from unnecessary contaminant migration.

Hot Floor Effectiveness: In 177 thermal case sites reviewed by CH2M Hill or Montrose, a hot floor was only implemented seven times, including six ERH case sites and one steam injection case site (the SCE Visalia Site). None of the ERH hot floors were conducted in a sand aquifer underlying a DNAPL-impacted zone, and two of the six ERH hot floors failed to reach target temperature. The Visalia Site was not a true hot floor since heating of the underlying aquifer unit was conducted to prevent the upward flow of cool groundwater, and there was minimal risk of downward migration since the heated NAPL (creosote) had a density near or slightly less than that of water. Therefore, less than 4% of the thermal case sites implemented a hot floor in any manner, and none of the thermal case sites implemented a hot floor in a manner similar to the Montrose Site. There is no basis of experience upon which to reliably evaluate the potential effectiveness of a hot floor at the Montrose Site. The DNAPL-impacted area at the Montrose Site is approximately 160,000 square feet or 3.7 acres, and a hot floor of this size has never previously been implemented, anywhere.

Fugitive Emissions: Over 200 soil borings and soil gas probes have been drilled at the Site since 1985 and may offer a migration pathway for steam and/or heated vapors following heating as well as other subsurface features such as buried debris, concrete footings, and the former wastewater pond. Bentonite or bentonite-rich cements are subject to shrinking, significant shrinking in some cases, when heated. There is no way to guarantee that these previously abandoned borings will not create a fugitive emission during thermal remediation. Once heated, the subsurface will remain hot for some time and can continue to generate steam and/or heated vapors in-situ. Interruptions in the vapor recovery system, if excessively long, have an increased potential of creating a fugitive emission. In spite of the experiences and lessons learned at prior thermal remediation sites, prevention of fugitive emissions remains a genuine concern for implementation of thermal remediation projects today especially under the scale and conditions at the Montrose Site.

Del Amo Site References: The applicability of thermal remediation at the Del Amo Superfund Site is relevant to the Montrose Site. The Del Amo Site is literally across the street, and consequently, the lithology of the NAPL-impacted zone is very similar to the Montrose Site and nearly identical within the western portion of the Del Amo Site. The nature of the low permeability aquitard poses the greatest challenge to steam remediation and was a primary factor in the decision to not assemble steam injection as a formal remedial alternative for the Del Amo Site. Therefore, Montrose declines to remove the references as requested by EPA.

2-D Bench-Scale Study: Montrose made every effort to simulate Site conditions during the 2-D studies and evaluate the performance of a steam remedy. However, there were limitations to the extent that in-situ field conditions could be simulated in a 2-foot tall x 3-foot wide x 4-inch deep laboratory test cell. Some of the capillary barriers at the Site are as much as 4 feet thick, and it was physically impossible to simulate a 4-foot thick capillary barrier in a 2-foot tall test cell.

Although test cell size is a limitation of bench-scale studies, bench-scale tests generally do not underestimate the potential effectiveness of a technology in the field where there is much greater geologic complexity and less control over the processes involved in application of the technology. The 2-D steam flushing study involved a simple layering of soils, the test cell was completely confined, there was no groundwater inflow, and the steam injection and extraction wells were in close proximity to the DNAPL pool. Therefore, the bench-scale 2-D steam flushing study would not seriously underestimate the performance of a field scale thermal remedy, particularly with respect to recovery of MCB and DDT. Given the limited variability and complexity of the 2-D experiments, the bench-scale studies likely overestimate the performance of a field scale steam remedy.

References to the 2006 Basel Paper for Koppers Site: The reference to this site and technical author are appropriate and relevant, and therefore, Montrose declines to remove the reference from the DNAPL FS. Dr. Basel is a recognized expert in the field of thermal remediation technologies, and his evaluation of the applicability of thermal remediation at the Cabot Carbon/Koppers Superfund Site in Gainesville, Florida should not be dismissed. At that site, Dr. Basel evaluated the applicability of steam injection to treat DNAPL impacts to a low permeability aquitard.

TerraTherm's Conductive Heating Technology: AECOM consulted with TerraTherm during preparation of the FS, and conclusions regarding the applicability of the ISTD thermal technology to the Site are based on recommendations made by TerraTherm in 2007. The Montrose DNAPL is heavily chlorinated, and application of ISTD to the Site would be expected to generate a significant quantity of acid gas. Excessive acid gas production during ISTD implementation has been shown to corrode metal well casings, heater elements, wellhead controls, and aboveground piping. The statement in Section 4.6.2 will be revised to say that "ISTD is not readily applicable to soils impacted with highly chlorinated pesticides…"

Staged Thermal Implementation: This approach does not significantly reduce the implementabilty challenges of a large and complex full-scale steam injection project. No matter how many stages are considered, the treatment volume for full-scale steam injection remains the same. In essence, one set of implementability challenges are exchanged for a second and different set. Additionally, a staged thermal remedy does not result in significant cost savings. Implementability challenges associated with a large-scale and complex steam injection remedy cannot be avoided simply by conducting the remedy in stages.

Other Comments

Vadose Zone Soils between 10 and 25 feet bgs: The remedial strategy for the soils between 10 and 25 feet bgs is the same as for the soils between 4 and 10 feet bgs. That remedial strategy would be to manage VOCs in shallow soil gas using a surficial cap (i.e., vapor barrier) and vapor control system. The barrier system would protect human health and the environment by preventing exposure to VOCs in shallow soil gas. Montrose recommends that the remedial strategy for soils between 10 and 25 feet bgs be added to the Soil FS, and the remedial decision documented in the ROD for the Soils Operable Unit.

This letter provides an overview of the technical concerns that we have with EPA's comments on the draft DNAPL FS. We look forward to discussing these technical issues with you during our meetings on May 5 and 6 and hope that we will be able to establish a mutually acceptable path forward for completing the DNAPL FS. If you have any questions on these technical responses, please contact me at (562) 213-4141 or Mr. Michael Palmer of de maximis at (619) 546-8377.

Sincerely,

AECOM

Brian Dean
Senior Project Director

cc: Ms. Claire Trombadore, EPA Region 9, San Francisco, CA
Ms. Natasha Raykhman, CH2M Hill, Santa Ana, CA
Mr. Safouh Sayed, DTSC, Cypress, CA
Mr. Joe Kelly, Montrose Chemical Corporation, Bainbridge Island, WA
Mr. Karl Lytz, Latham & Watkins, San Francisco, CA
Mr. Kelly Richardson, Latham & Watkins, San Diego, CA
Mr. Paul Sundberg, Stockton, CA
Mr. Mike Palmer, de maximis, San Diego, CA